2:30

715-3 Cost Implications of Aortic Counterpulsation in Acute Myocardial Infarction: Results from a Randomized Clinical Trial

J. David Talley, E. Magnus Ohman, Barry S. George, Morton J. Kern, Christopher J. White, Conor Lundergan, Joseph R. Hartmann, Paul A. Gurbel, Harry R. Phillips, Lisa G. Berdan, Lai Choi Lam, Robert M. Califf, Daniel B. Mark. *University of Arkansas, Little Rock, AR; Duke University, Durham, NC*

To evaluate the cost implications of prophylactic aortic counterpulsation (IABP) to sustain coronary artery patency during acute myocardial infarction, we evaluated 102 (55%) from the 182 patients enrolled in the randomized IABP study. After coronary artery patency was established during acute cardiac catheterization, pts were randomized to IABP (N = 52) for 48 hours versus standard therapy, Control (C) = 50. During the hospitalization, pts with IABP had less recurrent ischemia (4% vs. 21%), less reinfarction (3% vs. 8%), less reocclusion (8% vs. 21%), and less need for emergency PTCA (2% vs. 11%). The duration of hospitalization (IABP = 10.4 vs. C = 9.7 days) and CCU stay (IABP = 4.7 vs. C = 3.9 days) were similar. The outcomes were similar in the substudy compared with the overall clinical trial. Median costs were:

	Cath Lab $	CCU/ICU $	Non-ICU $	Total $
IABP	5,910	3,239	1,804	17,903
Control	5,679	2,781	1,851	17,913

The cost of hospitalization was significantly greater in pts with recurrent ischemia ($21,069 vs. $17,492, p = 0.02) or reinfarction ($22,772 vs. $17,721, p = 0.06) compared with patients without these complications.

Thus: These findings suggest that a strategy of prophylactic IABP therapy after patency has been established during acute myocardial infarction while improving clinical outcomes does not increase hospitalization cost.

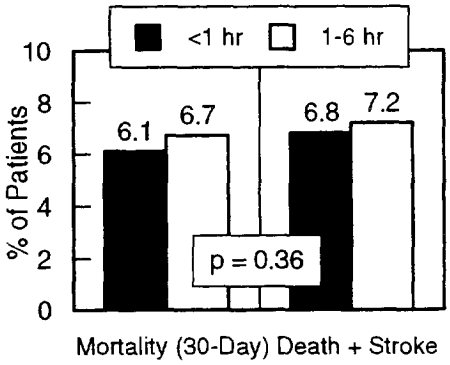
2:45

715-4 Thrombolytic Therapy During the "Golden First Hour" in GUSTO

A. Michael Lincoff, Robert M. Califf, Wolfgang Rutsch, Amanda Stebbins, Eric J. Topol, GUSTO Investigators. *Cleveland Clinic Foundation, Cleveland, OH*

Data derived from thrombolytic trials performed during the placebo-controlled era have suggested that initiation of reperfusion therapy during the "golden first hour" after onset of infarction may dramatically reduce mortality and improve myocardial salvage. Pts presenting within 1 hr in these early studies may also have differed from those presenting later by having larger infarctions or more hemodynamic compromise; early therapy may thus compensate for the high-risk profile of these patients. To determine in a large contemporary cohort the extent to which early-treated pts differ with regard to baseline characteristics and clinical outcome from pts presenting later, 1269 pts (3.2% of total) randomized to 4 different thrombolytic regimens within 1 hr of symptom onset (mean 0.8 ± 0.2 hr) were compared with 38,562 pts treated between 1 and 6 hrs (mean 3.2 ± 1.6 hr) in GUSTO.

	<1 hr	1–6 hr		<1 hr	1–6 hr
Age (yrs)	60.1	60.9	Killip 3 or 4 (%)	2.1	2.0
Male (%)	78.8	74.8	Systolic BP (mm)	127	129
Prior Angina (%)	46.4	36.5	Pulse (bpm)	75	75
Prior MI (%)	20.7	16.1	Anterior MI (%)	43	39



Pts receiving thrombolysis early (<1 hr) in the course of MI did not differ substantially with regard to severity of MI or any baseline clinical parameter from those presenting 1–6 hrs after symptom onset, except for a trend toward more frequent prior angina in the <1 hr group. Mortality (30-day) was 9% lower among the first hour pts (and not different between t-PA and SK groups) than among those treated later, comparable to the overall 14% mortality reduction by t-PA compared with SK in the main trial. Thus, despite the apparent existence of a "golden first hour" during early reperfusion trials, outcome following thrombolysis during the first hour in GUSTO was only modestly better than among patients treated later.

3:00

715-5 Reteplase vs Alteplase Patency Investigation During Myocardial Infarction Trial (RAPID 2)

W. Douglas Weaver, Christoph Bode, Curtis Burnett, John Kalbfleisch, Gerald Lorch, Semi Sen, Robert Chernoff, Richard Smalling, RAPID 2 Trial Investigators. *University of Washington, Seattle, WA*

It has been previously shown that double-bolus reteplase (r-PA) resulted in superior TIMI 3 flow rates at 60 and 90 minutes and follow-up compared to "standard" dose (100 mg/3 hours) alteplase (t-PA). To test whether this regimen was also superior to "accelerated" (100 mg/90 minutes) dose t-PA we studied 320 patients with acute myocardial infarction (MI). Patients were randomized to receive either 10 + 10 mu (30 minutes apart) bolus doses of r-PA or a 90-minute "accelerated" dose of t-PA. All patients received aspirin and IV heparin. Patency and TIMI 3 flow rates were determined at 30, 60, and 90 minutes and prior to discharge. The trial was completed 1 September 1994. A preliminary analysis of the baseline characteristics in the first 164 patients showed the average age was 58.4 years, 79% were male, 52% were current smokers, 9% had a prior history of MI, 43% had hypertension, and 25% had prior angina. The median time to treatment was 2.2 hours (25–75%tiles, 1.6–3.8 hours). The infarct related artery was the anterior descending in 36%, the right coronary in 52%, and the circumflex artery in 11% of patients.

In the combined data from both treatment groups, there were 14 deaths (8.6%), 4 strokes (2.4%), and 15.9% had "rescue" PTCA at 90 minutes because of continued coronary occlusion.

A complete comparative analysis of the angiographic and clinical findings in the r-PA and "accelerated" t-PA treatment groups will be presented.

3:15

715-6 International Joint Efficacy Comparison of Thrombolytics (INJECT): Reteplase vs Streptokinase in Acute Myocardial Infarction

John Hampton, Wolfgang Meyer-Sabellek, Rolf Schröder, Robert Wilcox, INJECT Trial Study Group. *University of Nottingham, UK; Universitätsklinikum Benjamin Franklin, Berlin, Germany*

Reteplase (r-PA) is a non-glycosylated recombinant plasminogen activator containing the kringle-2 and protease domains but lacking the finger, epidermal growth factor and kringle-1 domains. It has a longer half-life than native t-PA and the 20 MU dose administered as two 10 MU boluses separated by 30 minutes has been shown to achieve a 90 minute patency rate of 85%. The objective of the INJECT trial was to compare the efficacy and safety of this r-PA regimen with standard regimen Streptokinase (1.5 MU over 60 minutes) in patients with acute myocardial infarction receiving treatment within 12 hours of symptom onset. A double-blind, double-dummy design was employed and standard inclusion/exclusion criteria for thrombolysis applied. The primary endpoint was 35 day survival. Target recruitment was 6000 patients, this number providing good power to determine the clinical benefit of r-PA. Total recruitment was achieved over one year to September 1994. 211 Coronary Care Units in 9 countries participated. This paper will present for the first time the results of INJECT and thus provide a detailed characterisation of the efficacy and safety (including mortality) of Reteplase, a second generation direct plasminogen activator.

716 Silent Myocardial Ischemia

Monday, March 20, 1995, 2:00 p.m.–3:30 p.m.
Ernest N. Morial Convention Center, Room 61

2:00

716-1 Long-term Prognostic Significance of Exercise-Induced Silent Myocardial Ischemia in Apparently Healthy Volunteers

Jerome L. Fleg, Alan B. Zonderman, Lewis C. Becker, Steven P. Schulman, Gary Gerstenblith, Edward G. Lakatta. *Gerontology Research Center, NIA, NIH, and Johns Hopkins Bayview Medical Center, Baltimore, MD*

Silent myocardial ischemia (SI) defined by concordant ST segment depres-